

Track 2 - The smart energy system transition in cities and regions

Title of the proposed paper

Deriving and ranking decision making parameters for the decision making process of waste heat networks.

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3 keywords

Decision making process; Waste heat network; Local case studies.

Text abstract (max. 300 words)

This paper investigates the decision making process which precedes the implementation phase of a waste heat network. Based on a literature study, in-depth interviews, a workshop at the national heat network congress (Rotterdam, The Netherlands) and a (digital) survey, we derive parameters which, according to stakeholders, impact the decision making process of establishing (waste) heat networks. Subsequently these parameters are evaluated by means of the analytic hierarchy process (AHP) to calculate the weights of mutual hierarchy between the parameters. Based on this AHP analysis we argue that trust, mutual and clear agreements and the presence of a common goal are important factors for the successful establishment of a waste heat network. By categorizing data over the various stakeholders we conclude that the importance of specific parameters lack consistency and as a result require additional attention while implementing the waste heat network. Subsequently we design a conceptual framework for the decision making process establishing waste heat networks. We validate this framework by means of two single case studies on the Energy Transition Park Wijster and the northern Dutch port the Eemshaven. As a result, we are able to show the practical applicability in the decision making process itself.